{rokbox title=|Figure :: Image: Authors| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-importance-regional-differences-vulnerability-climate-change-demersal-fisheries-martins-aragao-et-al-2021-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-importance-regional-differences-vulnerability-climate-change-demersal-fisheries-martins-aragao-et-al-2021.jpg{/rokbox}

Guilherme Martins Aragão, **Lucía López-López**, Antonio Punzón, Elena Guijarro, Antonio Esteban, Encarnación García, José Manuel González-Irusta, Julia Polo, Miguel Vivas, **Manuel Hidalgo**
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The importance of regional differences in vulnerability to climate change for demersal fisheries.
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Abstract: Regional differences in climate vulnerability are particularly important in many countries with socio-ecological gradients or geographical and environmental spatial segregation. Many studies are regularly performed at the national level, but regional assessments can provide more detailed information and important insights into intra-national vulnerabilities. They require detailed information of many socio-ecological components that are often neglected at the regional scale but are meaningful and operational at national and international levels. In this work, we developed a climate vulnerability assessment (CVA) to investigate the vulnerability of demersal fisheries based on 19 indicators covering exposure, fisheries sensitivity, species sensitivity (SS) and adaptive capacity (AC) for nine coastal regions of Spain, contrasting the Mediterranean to Atlantic areas. Exposure was consistently larger in the Mediterranean than Atlantic regions, while AC showed the opposite trend. While fisheries and SS did not display a clear Atlantic-Mediterranean pattern, they were critical for capturing regional differences that have an impact on fisheries vulnerability. Our results highlight the generally higher vulnerability of Mediterranean demersal fisheries, mainly due to the lower AC and higher exposure of Mediterranean regions, while providing key regional elements for guiding national and international actions for adaptation. This study demonstrates that the spatial scale considered in the development of CVAs must recognise the spatial heterogeneity in the socio-ecological system within its unit of analysis in order to be a relevant tool for management and policy makers.

Keywords: climate change, climate vulnerability, regional assessments, demersal fisheries